) Congress, } HOUSE OF REPRESENTATIVES. { Document
?d Session. } { No. 667.

CANAL FROM CENTENNIAL LAKE AT VICKSBURG, MISS., TO MISSISSIPPI RIVER.

LETTER

FROM

HE SECRETARY OF WAR,

TRANSMITTING,

H A LETTER FROM THE CHIEF OF ENGINEERS, REPORTS ON RELIMINARY EXAMINATION AND SURVEY OF CANAL LEADING OM CENTENNIAL LAKE AT VICKSBURG, MISS., TO THE MISS-SIPPI RIVER, WITH A VIEW TO THE PRESERVATION OF THE ANNEL.

ARY 29, 1914.—Referred to the Committee on Rivers and Harbors and ordered to be printed, with illustrations.

WAR DEPARTMENT,
Washington, January 28, 1914.

SPEAKER OF THE HOUSE OF REPRESENTATIVES.

R: I have the honor to transmit herewith a letter from the Acting f of Engineers, United States Army, dated 26th instant, together copies of reports from the Mississippi River Commission, dated l 19 and November 21, 1913, with maps, on preliminary exami-on and survey, respectively, of canal leading from Centennial at Vicksburg, Miss., to the Mississippi River, made in compliance the provisions of the river and harbor act approved March 4,

Very respectfully,

LINDLEY M. GARRISON,
Secretary of War.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, January 26, 1914.

1: The Chief of Engineers, United States Army.
The Secretary of War.
ject: Preliminary examination and survey of canal leading from ntennial Lake at Vicksburg, Miss., to the Mississippi River.

There are submitted herewith, for transmission to Congress, re-dated April 19 and November 21, 1913, with maps, by the Mis-

sissippi River Commission, on preliminary examination and surv respectively, authorized by the following item contained in the ri and harbor act approved March 4, 1913:

Canal leading from Centennial Lake at Vicksburg, Miss., to the Mississippi Ri with a view to the preservation of the channel.

2. This canal was constructed as a new outlet for the Yazoo R under the project for improvement of the mouth of the Ya River and harbor at Vicksburg, Miss. The improvement appare desired is the protection of the caving bank in front of the cit Vicksburg along a portion of the canal. For reasons fully explai the commission believes that it is advisable for the United State construct the necessary revetment for the protection of the bank an estimated cost of $125,000, if funds can be provided for the s by law, provided local interests will remove the existing buildi and build about 1,500 feet of levee 10 feet high, which work is ne sary in order to grade the bank to a 3 to 1 slope; will guarantee United States against any damages or the cost of the right of way essary for the construction of the bank revetment, and will const an adequate surface-drainage system to care for the area between canal bank and the main line of the Yazoo and Mississippi Va Railroad, this work being necessary for the successful maintenan the revetment.

3. These reports have been referred, as required by law, to Board of Engineers for Rivers and Harbors, and attention is inv to its report herewith, dated December 16, 1913, concurring with views of the Mississippi River Commission.

4. After due consideration of the above-mentioned reports, I cur with the views of the Mississippi River Commission and the B of Engineers for Rivers and Harbors, and therefore report that improvement by the United States of canal leading from Cente Lake at Vicksburg, Miss., to the Mississippi River, is deemed ad ble to the extent of protecting the caving bank by revetment a estimated cost of $125,000, under the conditions of local cooper specified above. The full amount of the estimate should be prov in one appropriation.

EDW. BURR,
Colonel, Corps of Engineers,
Acting Chief of Enginee

REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HAR ON SURVEY.

[Second indorsement.]

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
December 16, 19

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. The investigations of the Mississippi River Commission el the information that the improvement desired in connection wit item of law providing for preliminary examination of the canal le from Centennial Lake at Vicksburg, Miss., to the Mississippi R with a view to the preservation of the channel, was the protecti

vetment of the caving bank in front of the city of Vicksburg, along portion of the canal constructed some few years ago as a new outlet mouth of the Yazoo River.

2. The results of the survey show that considerable caving has ken place between the mouth of the river and range 42, as shown accompanying tracing, a distance of about 4,800 feet, the protec- n of which is estimated to cost $125,000. It appears that in order properly grade the bank, several buildings will have to be partially noved and a section of 1,500 feet of levee will have to be rebuilt. is work is estimated to cost $32,500. The commission states that the revetment is undertaken by the United States the work of noval and damage to buildings and the rebuilding of the levee uld be provided for by local interests, who should also furnish cessary right of way for the revetment and construct an adequate face drainage system to care for the area between the canal bank d the main line of the Yazoo & Mississippi Valley Railroad. e commission expresses the opinion that the work of revetment uld be undertaken by the United States if funds can be provided the same by law.

3. The Board of Engineers for Rivers and Harbors concurs in the ws and recommendations of the Mississippi River Commission. the work be authorized by Congress, the entire sum, $125,000, uld be provided in a single appropriation, to be expended under Mississippi River Commission, subject to the conditions above lined by them.

4. In compliance with law, the board reports that except as con- plated by the above recommendations there are no questions of minal facilities, water power, or other subjects so related to the ject proposed that they may be coordinated therewith to lessen cost and compensate the Government for expenditures made in interests of navigation.

For the board:

FREDERIC V. ABBOT,
Colonel, Corps of Engineers,
Senior Member Present.

ELIMINARY EXAMINATION OF CANAL LEADING FROM CENTENNIAL LAKE AT VICKSBURG, MISS., TO THE MISSISSIPPI RIVER.

MISSISSIPPI RIVER COMMISSION,
St. Louis, Mo., April 19, 1913.

om: The President, Mississippi River Commission.
The Chief of Engineers, United States Army.
bject: Preliminary examination of canal leading from Centenial ake at Vicksburg, Miss., to the Mississippi River.

1. The following report by the Mississippi River Commission is mitted on a preliminary examination of the canal leading from tennial Lake at Vicksburg, Miss., to the Mississippi River, with a v to the preservation of the channel, required by section 2 of the r and harbor act of March 4, 1913.

2. This canal forms a part of the improvement known as the uth of the Yazoo River and Harbor at Vicksburg, Miss., which

was transferred to the Mississippi River Commission under a p vision of the river and harbor act of March 4, 1913.

3. The project adopted by Congress in the river and harbor of July 13, 1892 (Annual Report, Chief of Engineers, 1892, p. 1 (H. Doc. No. 125, 52d Cong., 1st sess., maps not printed), cont plated opening a new mouth or outlet for Yazoo River from original mouth on Old River (9.8 miles above the former outlet to Mississippi) through deep water down the wrong end of Old Ri thence across a neck of low land between Old River and Lake C tennial, and around the head of De Soto Island and down the arm of Lake Centennial to the Mississippi River, entering it upon channel side at Kleinston Landing.

4. Lake Centennial is the old bend of the Mississippi River cut in 1876, and De Soto Island, prior to the cut off, was the Louisi Peninsula, around which the river flowed. Vicksburg Harbor is part of the river along the city front of Vicksburg. The distance f head of the main cut to Kleinston Landing is 6.3 miles. Dred operations have extended above the head of the main cut up Old R 0.9 mile. The original estimate of cost, $1,500,000, was revised in 1 and reduced to $1,200.000. (See Annual Report, Chief of Engine 1893, p. 2032, with map.)

5. The project was completed in 1905 at a cost of $1,179,210 Subsequent expenditures for maintenance amount to $63,664 The new outlet was opened in the spring of 1903. Uninterru navigation of Vicksburg Harbor has been maintained for 10 ye and the new mouth of Yazoo River has been open to boats of 6 draft at mean low water. The extreme range between high and water at Vicksburg is 59 feet, but the usual variation is about feet.

6. The existing project is for maintenance, and the cost has va between $2,500 and $22,000 a year, the average cost being a $6,000 per year.

7. The annual commerce of Yazoo River, its tributaries, Vicksburg Harbor, as reported for seven years, varied betv 222,792 and 441,765 tons, the estimated values of which ranged f $6,801,000 to $13,272,000 per annum. The average of the comm was 321,594 tons per annum, and the average value $8,753,650.

8. The effect of the project, in conjunction with the work formed in Yazoo River and tributaries, has been to reduce fre rates as follows: Cotton, about 50 per cent; cotton seed, about per cent; live stock, about 66⅔ per cent; and grain, flour, meal, provisions, from about 33⅓ to 40 per cent. Rates to inland po where there is no water competition, indicate that existing fr rates would advance materially if navigation was permane suspended.

9. Further details of this work are given in the Annual Repo the Chief of Engineers for 1912, pages 768–771.

10. As indicated on the map and profile inclosed herewith, t has been a progressive deepening of a portion of the canal sinc construction which has caused caving and sloughing of the ba This caving has been most active during the past year after the of 1912, when the Mississippi River fell rapidly and the Yazoo R slowly, and caused a swift current in the canal. The caving has increased by surface water which drains toward the canal.

1. A public hearing was held at Vicksburg. The improvement ired is the protection of the banks of the canal where caving eatens the destruction of valuable private property and also the nsfer tracks and incline of the Alabama & Vicksburg Railway, n which large quantities of freight are transferred across the Mis- ippi River to and from the Louisiana shore. Copies [1] of the ers presented are appended.

2. Further data, which are not now available, are needed before ecision can be reached of the value and importance of the improve- nt proposed by the citizens of Vicksburg.

3. It is therefore recommended that a survey be made to deter- ne the worthiness of the improvement by the United States, to sist of location of shore lines, cross sections, and borings of the al and its banks from Centennial Lake at Vicksburg, Miss., to Mississippi River, for the purpose of ascertaining the extent and se of the caving, together with the estimated cost of permanently ng the banks of the canal.

C. McD. Townsend,
Colonel, Corps of Engineers.

[Second indorsement.]

Board of Engineers for Rivers and Harbors,
May 19, 1913.

the Chief of Engineers, United States Army:

or reasons stated herein, the board concurs with the Mississippi er Commission in recommending a survey in order to determine extent and advisability of the improvement.

or the board.

Wm. T. Rossell,
Colonel, Corps of Engineers,
Senior Member of the Board.

VEY OF CANAL FROM CENTENNIAL LAKE AT VICKSBURG, MISS., TO MISSISSIPPI RIVER.

Mississippi River Commission,
St. Louis, Mo., November 21, 1913.

n: The Mississippi River Commission.
The Chief of Engineers, United States Army.
ject: Survey of canal from Centennial Lake at Vicksburg, Miss., Mississippi River.

The following report is submitted on a survey of the canal ing from Centennial Lake at Vicksburg, Miss., to the Mississippi er, with a view to the preservation of the channel, as recom- ded by the Mississippi River Commission in report dated April 1913, on preliminary examination required by section 2 of the and harbor act approved March 4, 1913, approved by the rd of Engineers for Rivers and Harbors and authorized by the f of Engineers.

Reference is made to report on preliminary examination by the issippi River Commission dated April 19, 1913, and to report of Board of Engineers for Rivers and Harbors dated May 19, 1913.

[1] Not printed.

3. In addition to the hydrographic survey a complete topograp survey was made of both banks of the canal, and borings were m along the left or caving bank. Field work of the survey proper v commenced on July 28 and completed August 23, 1913. A bor party began work September 10 and completed work October Borings were made by driving 3-inch extra heavy pipe and bail out the samples with auger, earth digger, or sand pump, and ran in depth from 25 feet to 85 feet. Borings in all were made agg gating a depth of 506 feet.

4. The survey has been plotted to a scale of 1 to 5,000 and c nected with the surveys of the Mississippi River Commission and the Vicksburg engineer district. The survey of 1905—the m recent and complete survey by the Vicksburg district—is shown the map for comparison and to indicate the changes that have ta place. Comparative profiles of maximum channel depths and records of the borings are also shown on the map.

5. The survey shows that since the completion of the canal along this reach in 1903 there has been a general deepening widening of all sections, ranges 42 to 90. The major part of change occurred between 1903 and 1905; the changes noted si 1905, both as shown by the comparative sections and profile, minor and appear to be local in character. Below range 38 the c parative sections and profile show a progressive scour and deepen from year to year, with the exception of those of 1910, which app to show a general fill practically along the full length of the m cut. This was probably due to a series of very moderate flood sta in the Mississippi River from 1908 to 1910, when no water esca into the lower part of the Yazoo basin to return through this out The widening below range 38 has caused both banks of the cana cave, and on the Vicksburg side considerable damage to the prope along the shore of the canal has resulted from the caving banks. plants of the Gulf Compress Co. and the Merchants' Compress, toge with a line of protection levee on the front of the People's Comp Co., are seriously involved. The approach and the switching ya of the Alabama & Vicksburg Railway leading to the incline on east bank of the Mississippi River have been destroyed, necessita the construction of a new approach inadequate in capacity.

6. The excessive caving and deepening in the lower reach of canal are believed to be due to the abnormal overflows of 1912 1913, when the Yazoo basin was largely overflowed from creva at Beulah and Skipwith, in Mississippi, as well as the large amoun overflow at the lower end of the basin caused whenever the ri stage exceeds 48 feet on the Vicksburg gauge, which overtops bank along the unleveed reach of the Mississippi River below Br wick. As the overflow waters recede, the only effective outlet is mouth of the main cut of the Yazoo Canal. The dike across the v pass of Lake Centennial and the comparatively high river b thence to the end of the levee system at Brunswick effectively cl any other outlet after a stage of less than 48 feet is reached. waters are divided throughout the upper reach of the canal for st above 35 feet on the Vicksburg gauge (80 feet M. G. L.), a large tion flowing over the low dike at the head of the west arm of L Centennial and through the west arm until the main dike ac West Pass is reached, forcing the water out into the canal along

er reach to join that part coming around the head of De Soto nd, through the east arm of Lake Centennial. The progressive rease in area of each successive section as the two currents join is inly indicated on the map, ranges zero to 30. It will also be noted t the cross sections above range 38 are much smaller and more form in area and shape than those below. The east bank of the al is sloughing in many places, on account of bad drainage and perfectly constructed outfalls to storm-water sewers.

. The borings show that a limestone formation exists along the t bank of the canal between ranges 70 and 86, which will check lue scouring or caving tendency along that reach, and it is probable t no damage to the east bank will ever occur from caving above ge 58. Boring No. 5, on range 42, entered the limestone forma-, but there remains a batture as shown by boring No. 4 which ht be caved away. The borings on ranges 2 and 14 show a strata ery fine sand at elevations of 40 to 50 feet, mean Gulf level, zero feet below zero on the Vicksburg gauge, which might have con-uted to some extent to the caving conditions along this reach, which could not alone have caused the caving without the rgement and deepening of the sections noted in the previous agraph.

. The conditions causing the excessive scouring action in the er reach of the canal might be cured by removing the West Pass ee. This levee was constructed for two reasons: First, to prevent eddy from the Mississippi River up the canal and out through the st Pass which caused excessive deposits along the Vicksburg front; , second, to prevent a low-water channel for the Yazoo River ning in the west arm of Lake Centennial with its outlet at West s. The removal of this levee would therefore probably destroy the nnel along the Vicksburg front. The enlargement of this section he canal would also probably be prevented by the extension of the sissippi River levee system from Brunswick to the West Pass ee, thus preventing the conditions enumerated in paragraph 6.

It is thought that the progressive widening and deepening in lower reach has about reached a maximum, and that unless over-s occur in the Yazoo Basin exceeding those of 1912 and 1913 in ht and volume, very little further damage will be done. But in r to absolutely prevent further caving in this reach, bank revet-t is necessary from the mouth of the canal to range 42, a distance bout 4,800 feet. The revetment should be of standard Mississippi r Commission third district construction, with channel mats 150 wide instead of 250 feet, which will carry the work well out to deepest water.

he following is an estimate of the cost of the work:

squares channel mat, at $8 per square	$64,000
squares paving, at $9 per square	36,000
linear feet grading, at $1 per linear foot	4,800
	104,800
for office charges, depreciation of plant, and contingencies, 20 per cent.	20,200
Total	125,000
per linear foot	26

he annual cost of maintenance is estimated at $10,000.

In order to grade the bank to a 3 to 1 slope, several import buildings will have to be partially removed and about 1,500 feet levee 10 feet high would have to be rebuilt. The following is an es mate of the cost of this work:

Removal and damage to buildings	$25,
30,000 cubic yards levee work, at 25 cents per cubic yard	7,
Total	32,

If the revetment is undertaken by the United States, this w should be provided for by the local interests and the United Sta guaranteed against any damages or the cost of the right of w necessary for the construction of the bank revetment. And for successful maintenance of the revetment an adequate surface drain system should be constructed to care for the area between the ca bank and the main line of the Yazoo & Mississippi Valley Railro

10. The following are the receipts and shipments at the port Vicksburg as given in the report of the Chief of Engineers for the y ending June 30, 1913:

	Tonnage.	Valuati
Yazoo River and tributaries	218,370	$6,16
Mississippi River	60,141	2,50
Mississippi River, ferry traffic	555,800	25,00
Total	834,311	33,66

The ferry traffic reported above was handled largely on board c transferred across the Mississippi River by the Alabama & Vicksb and Vicksburg, Shreveport & Pacific Railways between Kleins Landing and Delta Point.

11. The city of Vicksburg owns and controls the public land between Glass Bayou and the foot of South Street, a frontage 3,000 feet, and it is open to all boats without charge. There are terminal facilities owned or operated by the city or any of the stea boat companies landing at this point. Below the city landing frontage is owned by various parties. Wholesale warehouses, cot compresses, and oil mills occupy most of the frontage. During h stages of the river freight is transferred direct from warehouses boats and barges, but none own or operate specially constructed cilities for transferring the freight. During 1913 facilities have b installed by the Alabama & Vicksburg Railway between Depot South Madison Streets for the purpose of transferring riprap st from cars to barges, these facilities having been operated solely the benefit of contractors furnishing stone to the third and fou districts of the Mississippi River Commission for use on revetm works.

The Alabama & Vicksburg Railway Co., in connection with Vicksburg, Shreveport & Pacific Railway (Queen & Crescent Syste owns and operates an incline just below the mouth of the canal for purpose of transferring passengers and freight cars across the ri the transfer facilities being very important and the only connect between the lines east and those west of the river.

The incline proper is located on the east bank of the Mississi River, and the approach tracks and switching yards are along

st active caving part of the canal. The transfer facilities are used y by the railway company.

2. Letters were sent to all parties known to be interested in the posed improvement, requesting information as to commercial and er interests involved, present and prospective. Replies have been eived from the following: The city of Vicksburg, Gulf Compress , Alabama & Vicksburg Railway Co., P. P. Williams & Co., and rchants' Compress Co. Copies of these replies are transmitted ewith.

3. The east bank of the canal is the best location for the estab- ment of terminal facilities of maximum efficiency. Both railroad npanies have tracks along the bank of the canal without owning property to the water's edge. The city owns and controls a lic landing, where public terminals could be built connecting n steamers and both rail lines. There are no questions of water- ver development nor other subjects that may be properly con- ted with this improvement.

4. While it is shown by the foregoing that the work desired by the l authorities is not necessary in the interest of navigation, it is manifest that the existing condition, involving present and future nace to the canal banks both above and below Centennial Lake, well as the destruction of private property, has resulted from the ow and confinement of the waters of the Mississippi River at high d stages, probably not considered in the preparation of the original ect, and that it is the duty of the Mississippi River Commission ay these facts before Congress.

5. It is the opinion of the commission that the extension of the sissippi River levee system as described in paragraph 8 will remove danger of a recurrence of the conditions at present existing; such nsion has been and is in contemplation by the commission, when work now in progress on the controlling levee line has reached a stage as to admit the allotment of the necessary funds from the lar appropriations for the improvement of the Mississippi River. would not, however, be in the near future. The proposed ex- ion (shown on map 2) is about 25 miles long and is estimated to $1,000,000, and the benefits to be derived from such expenditure ld not be confined to the Vicksburg front, but extended to some 315 acres of land. (See H. Doc. No. 1010, 62d Cong., 3d sess.)

6. The commission is also of the opinion that the work of revet- t as described in paragraph 9, should also be undertaken by the ed States, if funds can be provided for the same by law.

C. McD. Townsend,
Colonel, Corps of Engineers.
Robert S. Taylor,
J. A. Ockerson,
Homer P. Ritter,
Assistant, United States Coast and Geodetic Survey.
J. G. Warren,
Colonel, Corps of Engineers.
C. H. West,
Lansing H. Beach,
Colonel, Corps of Engineers.

or Report of the Board of Engineers for Rivers and Harbors see 2.]

LETTER OF THE ALABAMA & VICKSBURG RAILWAY CO.

NEW ORLEANS, LA., *October 9, 191*

From: Alabama & Vicksburg Railway Co.,
To: Capt. Ernest Graves, Corps of Engineers.
Subject: Information in regard to property along the Vicksburg Harbor.

1. River frontage from south line of Fairgrounds Street, extending down the r 2,315 feet; also river frontage from north side of Henry Street, extending down river 1,660 feet to the south side of South Street.

2. Alabama & Vicksburg Railway Co. The property is used also for the busi of the Vicksburg, Shreveport & Pacific Railway Co.

3. While the companies have no accurate commercial valuation of the prope having owned a part of it for more than 50 years, the first tract named constitutes river terminal and approach to the Mississippi River landing for the transfer b which handle across the river all freight, passengers, Uinted States mail, and exp interchanged between the Alabama & Vicksburg Railway Co. and the Vicksb Shreveport & Pacific Railway Co. The second tract is occupied by switch tr serving the commercial warehouses located along the river front and those com cial houses are among the most important interests in Vicksburg. The value there lies in the usefulness to the railroad company for these purposes and to the merch of the city of Vicksburg. Any further encroachments of the river at this point impair if not fully destroy the usefulness of these facilities.

4. The first tract from Fairgrounds Street south is used for the storage tracks, approach, cradles, and incline for approach to the transfer boats which handl freight, passengers, mail, etc., interchanged between the Alabama & Vicksburg the Vicksburg, Shreveport & Pacific Railway Cos., as stated above.

5. Large quantities of stone for use of the United States Government are loa direct from the switch tracks onto barges and occasionally small lots of coal are patched by barges or cars on said tracks. In addition large quantities of grain other freight are delivered to and received from the warehouses located on t tracks for shipment.

6. Our records are not so prepared as to enable us to answer in detail, giving actual tonnage delivered to or received from the warehouses, and we have no m of knowing its actual cash value, but it represents a large tonnage.

7. Yes.

8. There was handled eastbound across the river for the Alabama & Vicksburg, Vicksburg, Shreveport & Pacific Railway Cos. during the year ended June 30, 425,015 tons of freight, the principal items being:

Grain and grain products	42
Cotton	18
Cotton seed, hulls, meal, cake, and oil	59
Live stock	2
Packing-house products and fresh meat	32
Stone, sand, and gravel	15
Lumber and forest products	232
Petroleum and mineral oil	12

During the same period there was handled westbound 241,532 tons of freight principal items being:

Grain and grain products	4
Fruit and vegetables	8
Stone, sand, and gravel	3
Coal and coke	64
Lumber and logs	8
Sugar	10
Machinery, pipe, and manufactured iron	32
Household goods and furniture	4
Agricultural implements, and vehicles	8
Fertilizer	44
Merchandise	24
Manufactured articles	12

It is impossible to give the value of these commodities, but they constitut entire traffic of the Vicksburg, Shreveport & Pacific Railway Co., moving east west through Vicksburg, the value of which amounts to many millions of dolla

All of this freight is handled in cars over this property upon which is locate incline to the transfer boats, which transfer the cars and contents from one side

to the other. During the fiscal year ended June 30, 1913, this company deliv- eastbound 20,860 loaded freight cars and 5,107 loaded passenger cars; westbound handled 15,944 loaded freight cars and 5,124 loaded passenger cars; 43,558 pas- ers were handled in passenger trains over this incline westbound, and 52,498 ngers were handled eastbound during the year 1912–13.

The tract of land first named is the location of the approach to the Mississippi r for the Alabama & Vicksburg Railway Co., and contains the main track and approach, incline, cradles, and the storage tracks used in connection therewith. careful investigation, it was found to be the only practicable approach to the in the vicinity of Vicksburg. All of the freight, passenger, mail, and express ness received from or delivered to the Vicksburg, Shreveport & Pacific Railway s handled across the Mississippi River by the transfer boats referred to above, and ved or delivered over the incline and tracks located upon the land. The ap- h tracks are located on the immediate bank of the Yazoo River and a very large of the land formerly occupied by similar tracks has caved into the river. On nt of this erosion, which has carried away a large amount of track, track scales, valuable property, it has been necessary to move the tracks to their present loca- but under present conditions the facilities have been very much reduced and are wholly inadequate. They are operated at largely increased cost, hazard, and . The company has had periodical interruptions of service of from 4 to 10 duration, due to caving banks, since the construction of the Yazoo Canal, and forced on this account to transfer passengers, mail, and express by special boat gement, freight traffic being suspended during these periods.

e present situation is such that any further erosion of the bank is likely to prevent utely any further shifting of the tracks and use of the incline now in existence, by possibly breaking permanently through connection between the Alabama & sburg and Vicksburg, Shreveport & Pacific Railway Cos.

ALABAMA & VICKSBURG RAILWAY CO.,
By D. D. CURRAN, *President and General Manager.*

LETTER OF MERCHANTS COMPRESS CO.

VICKSBURG, MISS., *October 12, 1913.*

: Merchants Compress Co.
apt. Ernest Graves, Corps of Engineers.
ct: Information in regard to property along the Vicksburg Harbor.
Location and description of property or interests covered by this report: Machin- neds and yards.
Names of owners: Merchants Compress Co. of Vicksburg, Miss.
Estimated valuation of the property: $150,000.
What is the property used for? Compress of cotton and storage of cotton, grain, ther merchandise.
Is any freight received or dispatched by boats or barges direct from the ware- or switch track? No.
Are there any facilities for transferring freight from warehouse or switch tracks ats or barges, or vice versa? No. At high water boats can land alongside.

MERCHANTS COMPRESS CO.,
By W. H. FITZHUGH. *Vice President.*

LETTER OF P. P. WILLIAMS & CO.

VICKSBURG, MISS., *October 13, 1913.*

: P. P. Williams & Co.
apt. Ernest Graves, Corps of Engineers.
ct: Information in regard to property along the Vicksburg Harbor.
Location and description of property or interests covered by this report: Three and concrete warehouses on Yazoo Canal bank, Vicksburg.
Names of owners: P. P. Williams & Co.
Estimated valuation of the property: $150,000.
What is the property used for? Merchandising, shipping, and storage.
Is any freight received or dispatched by boats or barges direct from the ware- or switch track? Yes.

6. If so, state the average amount, valuation, and nature of freight so handled annum: $1,000,000 to $1,500,000.

7. Are there any facilities for transferring freight from warehouse or switch tr to boats or barges, or vice versa? No. At high water boats land alongside.

P. P. WILLIAMS & C

LETTER OF MR. C. C. HANSON, RECEIVER.

MEMPHIS, TENN., *October 18, 191*

From: Gulf Compress Co. (C. C. Hanson, receiver).
To: Capt. Ernest Graves, Corps of Engineers.
Subject: Information in regard to property along the Vicksburg Harbor.

Answering your recent inquiry made in connection with the survey for the impr ments of the Yazoo Canal along the Vicksburg front—information wanted for Chief Engineer United States Army.

1. The Gulf Compress Co. own a compress and warehouse plant located along Yazoo Canal, which plant is known in Vicksburg as the "Peoples compress."

2. The Gulf Compress Co. acquired the property from the Peoples Press Co. eral years ago and is now the sole owner of it.

3. We paid $200,000 for the property, which was about the cost of the land, bu ings, and machinery when it was new. The value of the property is much less due to a number of reasons: (*a*) Lack of business, due to operations of the boll we in the Vicksburg territory; (*b*) damage that has been done and further threat in connection with the rise and fall of the water in the Yazoo Canal, sloughi banks, etc.

4. The properties are used for the storage and compression of cotton.

5. No freight is received or dispatched from boats or barges direct from the pl The plant receives a good deal of river cotton, which cotton is drayed to it from points along the canal as the boats land and discharge same. We have been figu for several years on a boat or barge landing opposite our property for the purpo economizing and facilitating the handling of cotton in and out, and also with a of building up a general warehouse business in connection with river traffic. sloughing of the banks, etc., has been such that it has discouraged us in our ef to the extent, at least, of making so far no efforts at all along that line.

6. None at present, except as stated in No. 5. If the water can be kept in canal and the banks on compress side stopped from sloughing, our people would in a boat and barge landing with a view of working up a large storage busines coal, cement, and other commodities, available to river traffic, where the pr facilities and accommodations can be had.

7. No facilities for boats or barges at present, the reasons for which have alr been stated in previous numbers.

8. Nothing at present, other than that cotton, which is drayed to us, as is st above, but a general storage business for Vicksburg and vicinity can be worked provided the canal front becomes sufficiently stationary to warrant an investi in boat and barge landing and the necessary machinery for economical loading unloading of freight.

W. H. Fitzhugh, of Vicksburg, is better qualified to state the value of the modities that are available to such river storage and handling proposition than i writer.

9. The cement manufacturers of Missouri, the coal miners of Pennsylvania, other manufacturing enterprises have sent representatives to Memphis during the 12 months who have discussed with us the advantages Vicksburg has as a concentr storage and reshipping point for their products. They want facilities, rates, etc.

It is thought that a big volume of storage business from along the Mississippi R and its tributaries, particularly north of Vicksburg, could be worked up for st or reshipment through Vicksburg, provided the canal front at Vicksburg c be so controlled as to warrant the putting in of modern machinery for loading anc loading purposes at or near the Vicksburg warehouses, or space where warehouses c be built.

If this does not give you the information desired, I will be pleased to go fu into the matter for you.

Yours, very truly,

C. C. HANSON, *Receiv*

LETTER OF MR. J. J. HAYES.

VICKSBURG, MISS., *October 28, 1913.*

: J. J. Hayes, mayor, the city of Vicksburg.
Capt. Graves, Corps of Engineers.
ect: Information in regard to property along the Vicksburg Harbor.
Location and description of property or interests covered by this report: Extend-
long the bank of the Yazoo Canal for a distance of about 1 mile. Cotton com-
es, storage sheds and yards, railroad terminal tracks and incline, grain and gro-
warehouses, cotton-oil mills, and storage warehouses.
Names of owners: There are about 25 different owners, the largest of whom you
had reports from.
Estimated valuation of the property: Between $2,000,000 and $3,000,000.
What is the property used for? Handling cotton and merchandise, manufac-
g, merchandising, etc.
Is any freight received or dispatched by boats or barges direct from the ware-
or switch track? Yes; a large volume.
If so, state the average amount, valuation, and nature of freight so handled per
m: From $4,000,000 to $5,000,000.
Are there any facilities for transferring freight from warehouse or switch tracks
ats or barges, or vice versa? No.
If so, describe the arrangements and state the average amount, value, and kind
ight handled annually: Freight is hauled or carried between the boats and the
ouses.
State any further facts or arguments bearing on the subject: The property in-
d embraces the firms or corporations who do 90 per cent of the city's jobbing
ess.

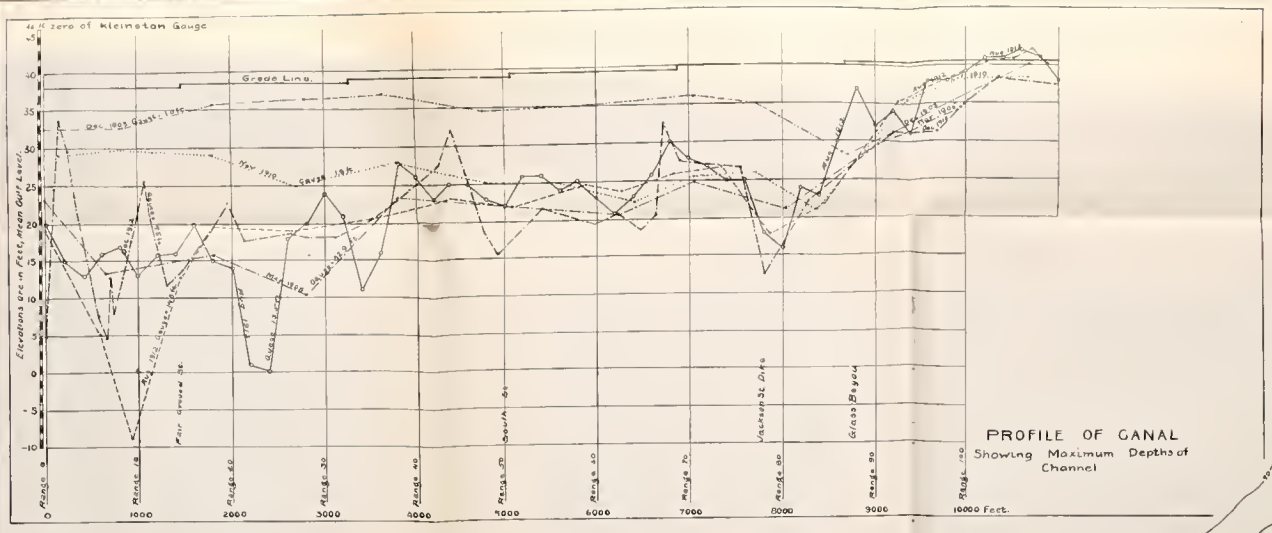
J. J. HAYES, *Mayor.*

○

WAR DEPARTMENT.

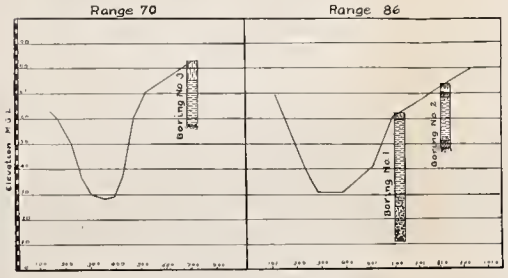
CORPS OF ENGINEERS, U. S. ARMY.

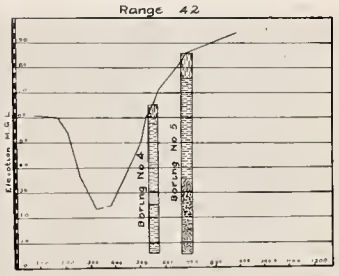
PLATE No 1.

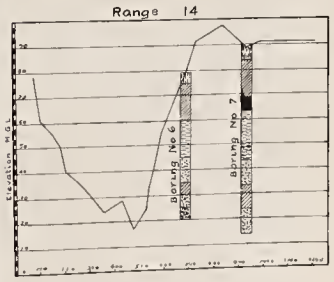


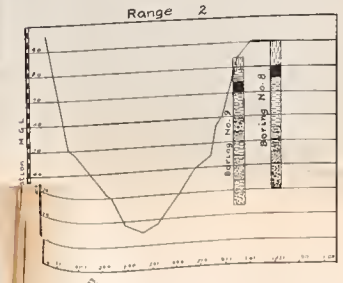
PROFILE OF CANAL
Showing Maximum Depths of Channel

BORING SECTIONS









- Silt
- Sandy Loam
- Clay
- Fine Sand
- Coarse Sand
- Rotten Lime stone
- Buck shot
- Coarse Sand and Gravel

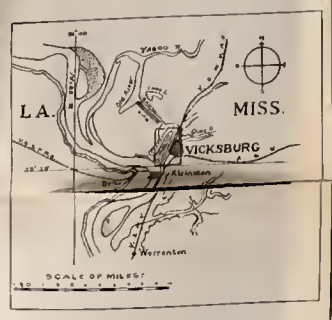
LAKE CENTENNIAL

DeSoto Island

LAKE CENTENNIAL (Old Bed)

VICKSBURG

MISSISSIPPI RIVER



MISSISSIPPI RIVER COMMISSION.
THIRD DISTRICT.

CANAL LEADING FROM CENTENNIAL LAKE AT VICKSBURG, MISS. TO THE MISSISSIPPI RIVER.

SURVEY OF AUGUST, 1913.

MADE UNDER THE DIRECTION OF
Capt. Ernest Graves, Corps of Engineers, U.S.A.
A. M. Todd, Asst. Eng.

SCALES OF FEET
HORIZONTAL
VERTICAL

Plotted Aug 1913 BY C.J.R.
Traced Aug 1913 BY C.J.R.

All Elevations and Contours are Referred to Mean Gulf Level.
Soundings Plotted Unreduced Vicksburg Gauge 13.5 ft.
Original Section of Canal as Completed in 1902.
Sections and Shore Line of December 1905
The above Compiled from Maps made by the Vicksburg Engineer District

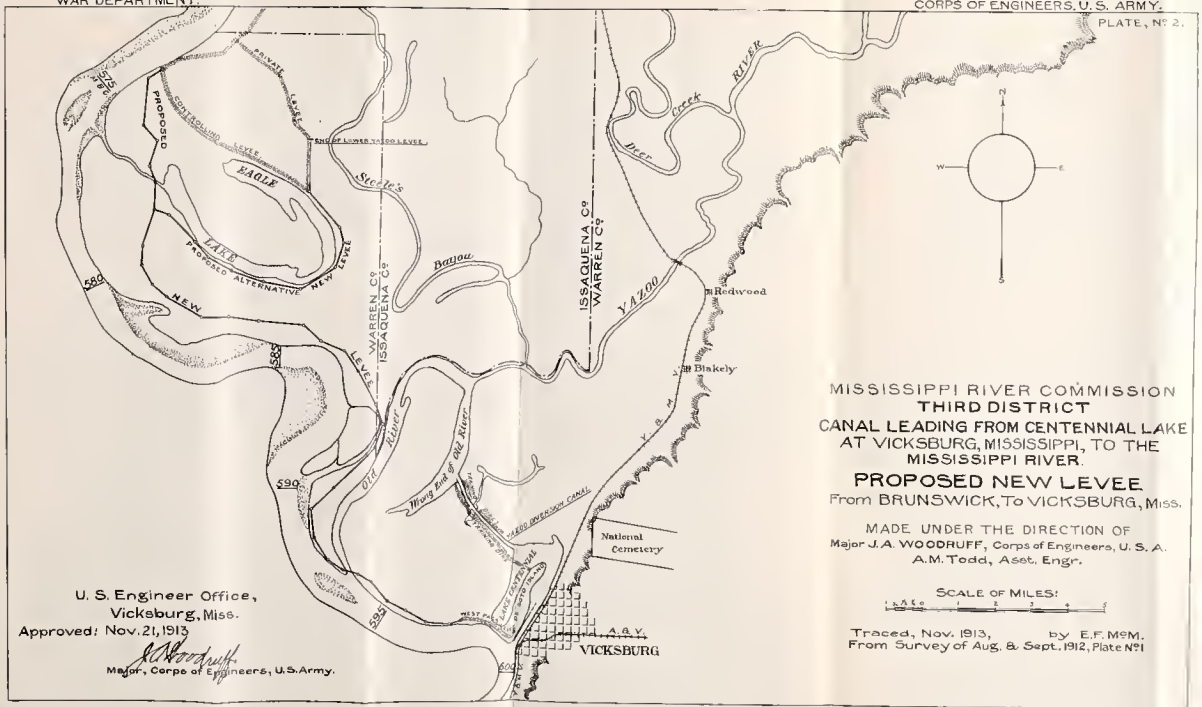
U.S. Engineer Office
Vicksburg, Miss.
Approved Nov 21, 1913.
Ernest Graves
Capt, Corps of Engineers U.S.A.

House Doc. No. 667 ; 63d Cong., 2d Sess.

WAR DEPARTMENT.

CORPS OF ENGINEERS, U. S. ARMY.

PLATE, Nº 2.



MISSISSIPPI RIVER COMMISSION

THIRD DISTRICT

CANAL LEADING FROM CENTENNIAL LAKE AT VICKSBURG, MISSISSIPPI, TO THE MISSISSIPPI RIVER.

PROPOSED NEW LEVEE

From BRUNSWICK, To VICKSBURG, Miss.

MADE UNDER THE DIRECTION OF

Major J. A. WOODRUFF, Corps of Engineers, U. S. A.

A. M. Todd, Asst. Engr.

SCALE OF MILES:

0 1 2 3 4 5

Traced, Nov. 1913, by E. F. McM.

From Survey of Aug. & Sept. 1912, Plate Nº1

U. S. Engineer Office,

Vicksburg, Miss.

Approved: Nov. 21, 1913

J. A. Woodruff

Major, Corps of Engineers, U. S. Army.

House Doc. No. 667 ; 63d Cong., 2d Sess.